Attorney Docket No. 005430.00002

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	**BOX PCT**
Matthias RŰSING, et al.	National Phase Application PCT/EP00/08778
Serial No. Unasigned	Filed: September 8, 2000
Filed: CONCURRENTLY HEREWITH	Group Art Unit: Unassigned
For: NUCLEIC ACID WHICH IS OBTAINED FROM TETRAHYMENA AND WHICH CODES FOR A DELTA-6-DESATURASE, THE PRODUCTION THEREOF AND USE	

SUBMISSION OF SEQUENCE LISTING

Assistant Commissioner of Patents & Trademarks
Washington, D.C. 20231

Dear Sir:

A paper copy of a substitute sequence listing is submitted herewith to place the sequence listing consistent with U.S. practice. I believe that the sequences in the original application and the attached substitute sequence listing are identical. Substitution of the substitute sequence listing therefore adds no new matter to the specification

Applicants also submit a computer readable form of the formal sequence listing for use in the present application.

The content of the two forms, paper and CRF, are believed to be identical.

Respectfully submitted,

March 8, 2002
Date

Lydia M. Hemmendinger, Reg. No. 42,653
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SEQUENCE LISTING

<110> Aventis Research & Technologies GmbH & Co KG

<120> Nucleic Acid Which is Obtained from Tetrahymena and which Codes delta 6-Desaturase, the Production Thereof and Use

<130> Banner & Witcoff Attorney Docket Number 005430.00002;National Phase Application of PCT/EP00/08778

<140> TBA
<141> 2002-03-08

<150> DE 19943270.8
<151> 1999-09-10

<160> 19

<170> PatentIn Ver. 2.1

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<212> DNA
<213> Tetrahymena thermophila

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tcacaaacaa cattctaaag gacgaagata tctaacacga ttacaaattg tggtaattcc 660

ccttcttatt tttaaagtgg aaattagact ccatcttagc ttcttattat gaatttgaag 720

gaatcttcct tgccttgcac tgggtattat tattcaacta aaacttctat atcgtaattc 780

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aaatgaaatt cgaaagaaga atcactttac catttttcga acatcaaata gctgcaagca 900

gaaactacgc tttccacgac atattctctc tacttattat gggtggtatg taatattaga 960

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<212> PRT

<213> Tetrahymena thermophila

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20 25 30

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35 40 45

Leu Asn Leu Phe Ile Asp Glu Lys Gln Asp Leu Thr Glu Tyr Phe Arg
50 55 60

Thr Leu His Ser Lys Gln Ala Leu Lys Ile Leu Lys Ser Phe Pro Lys
65 70 75 80

Thr Gly Ala Lys Gln Glu Glu Thr Glu Ser Ser Lys Arg Phe Ser Ile
85 90 95

Leu Lys Lys Lys Leu Lys His Leu Phe Glu Pro Asn Trp Pro Ile Glu

100 105 110

Ile Gly Leu Phe Leu Thr Thr Phe Thr Leu Phe Val Thr Gly Cys Leu
115 120 125

Thr Gln Lys Trp Tyr Phe Ser Ile Pro Leu Leu Val Leu Met Gln Ile
130 135 140

Ile Ser Gly Trp Ile Gly His Ser Met Asn His Asn Arg Asn Pro Ile
145 150 155 160

Leu Arg Lys Phe Ala Leu Val Tyr Ala Pro Leu Cys Gly Gly Phe Ser
165 170 175

Asn Lys Trp Trp Gly Arg Lys His Asn Gln His His Met Phe Thr Asn
180 185 190

Asn Ile Leu Lys Asp Glu Asp Ile Gln His Asp Tyr Lys Leu Trp Gln
195 200 205

Phe Pro Phe Leu Phe Leu Lys Trp Lys Leu Asp Ser Ile Leu Ala Ser
210 215 220

Tyr Tyr Glu Phe Glu Gly Ile Phe Leu Ala Leu His Trp Val Leu Leu
225 230 235 240

Phe Asn Gln Asn Phe Tyr Ile Val Ile Leu Ser Glu Leu Ile Ala Gly
245 250 255

Phe Phe Ser Ala Ser Ile Leu Val Gly Asn His Glu Asn Glu Met Lys
260 265 270

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275 280 285

Ser Arg Asn Tyr Ala Phe His Asp Ile Phe Ser Leu Leu Ile Met Gly
290 295 300

Gly Met Gln Tyr Gln Thr Glu His His Phe Phe Pro Gln Ile Pro Phe
305 310 315 320

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<213> Tetrahymena thermophila

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<211> 10

<212> PRT

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<210> 5

<211> 13

<212> PRT

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<400> 5

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<210> 6

<211> 20

<212> DNA

<213> Artificial Sequence

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<223> Description of artificial sequence:primer

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<210> 7

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<223> Description of artificial sequence:primer

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cgdggraana rrtgrtgttc 20

<210> 8

<211> 40

<212> DNA

<213> Artificial Sequence

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<212> DNA

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<212> DNA

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<223> Description of Artificial Sequence:Primer

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